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U.S. AIR FORCE
Project **RAND**
RESEARCH MEMORANDUM

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U. S. AIR FORCE

PROJECT RAND

RESEARCH MEMORANDUM

GRAPHS OF PARTIAL SUMS OF THE BINOMIAL DISTRIBUTION

Herman Kahn and Irwin Mann

RM-1880

ASTIA Document Number AD 123517

27 February 1957

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Graphs of Partial Sums of the Binomial Distribution

The following graphs were used in calculations for "Techniques of Systems Analysis," RM-1829. We have had a number of requests for their use for general purposes and so are making them available here.

The values used are simply taken from the tabulations of:¹

$$R = \sum_{i=r}^n \binom{n}{i} p^i (1-p)^{n-i}$$

If n = total number of trials
 p = probability of success of any trial
 R = probability of at least r successes,

the graph can be used to:

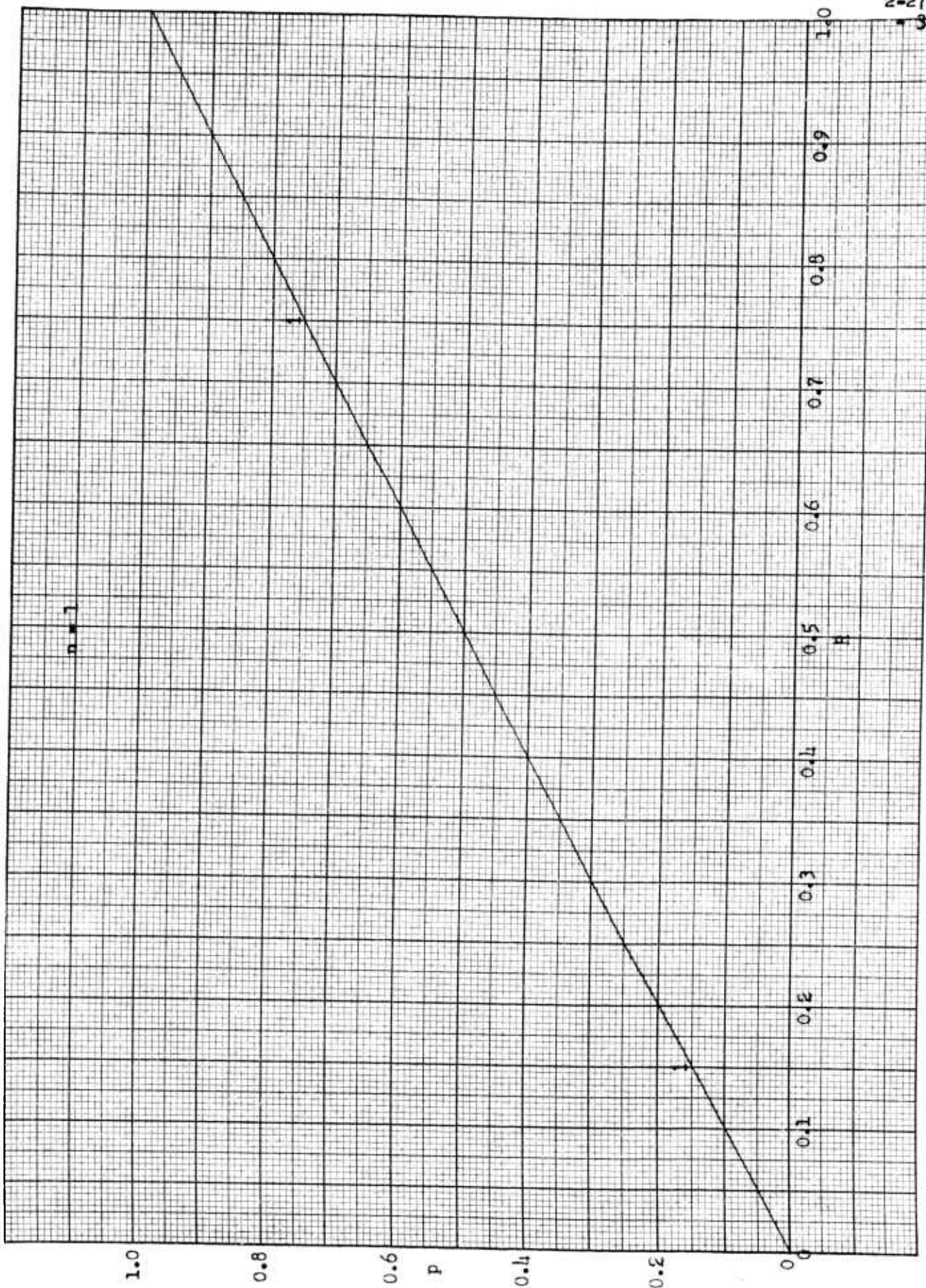
- 1) read off the probability of any particular number of successes, and/or
- 2) Monte Carlo the probability of r successes in n trials.

¹ National Bureau of Standards, Applied Mathematics Series 6.

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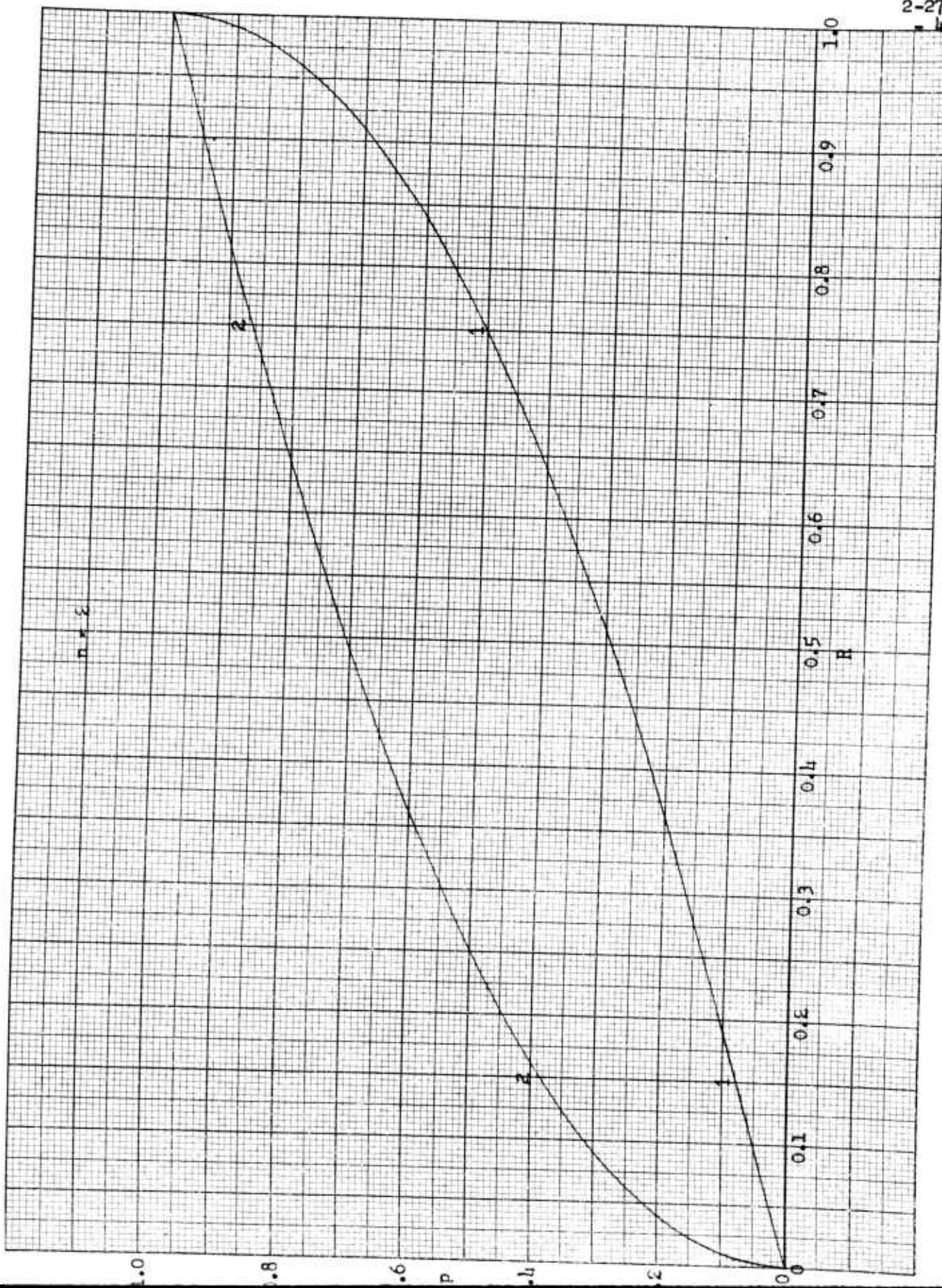
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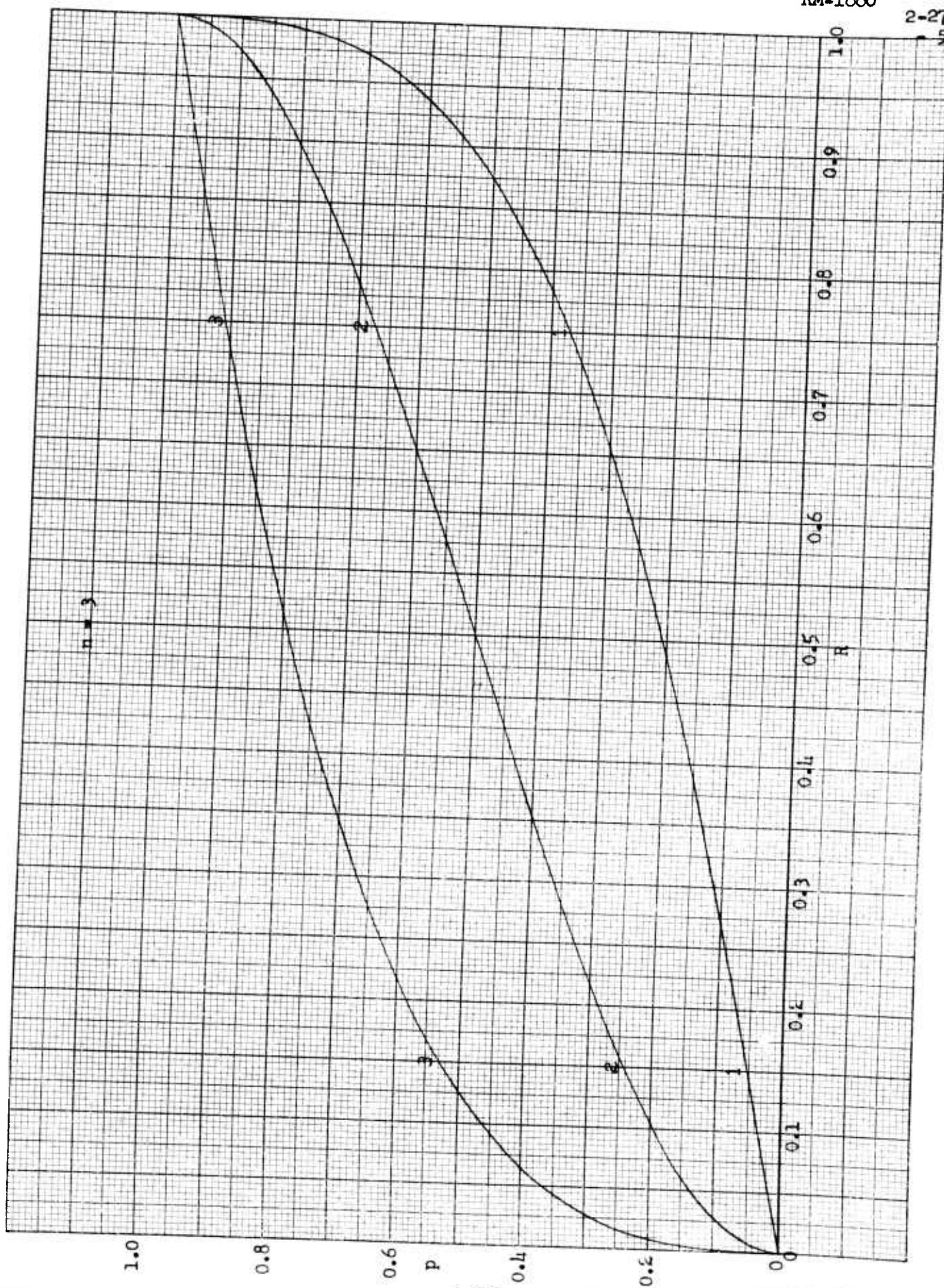
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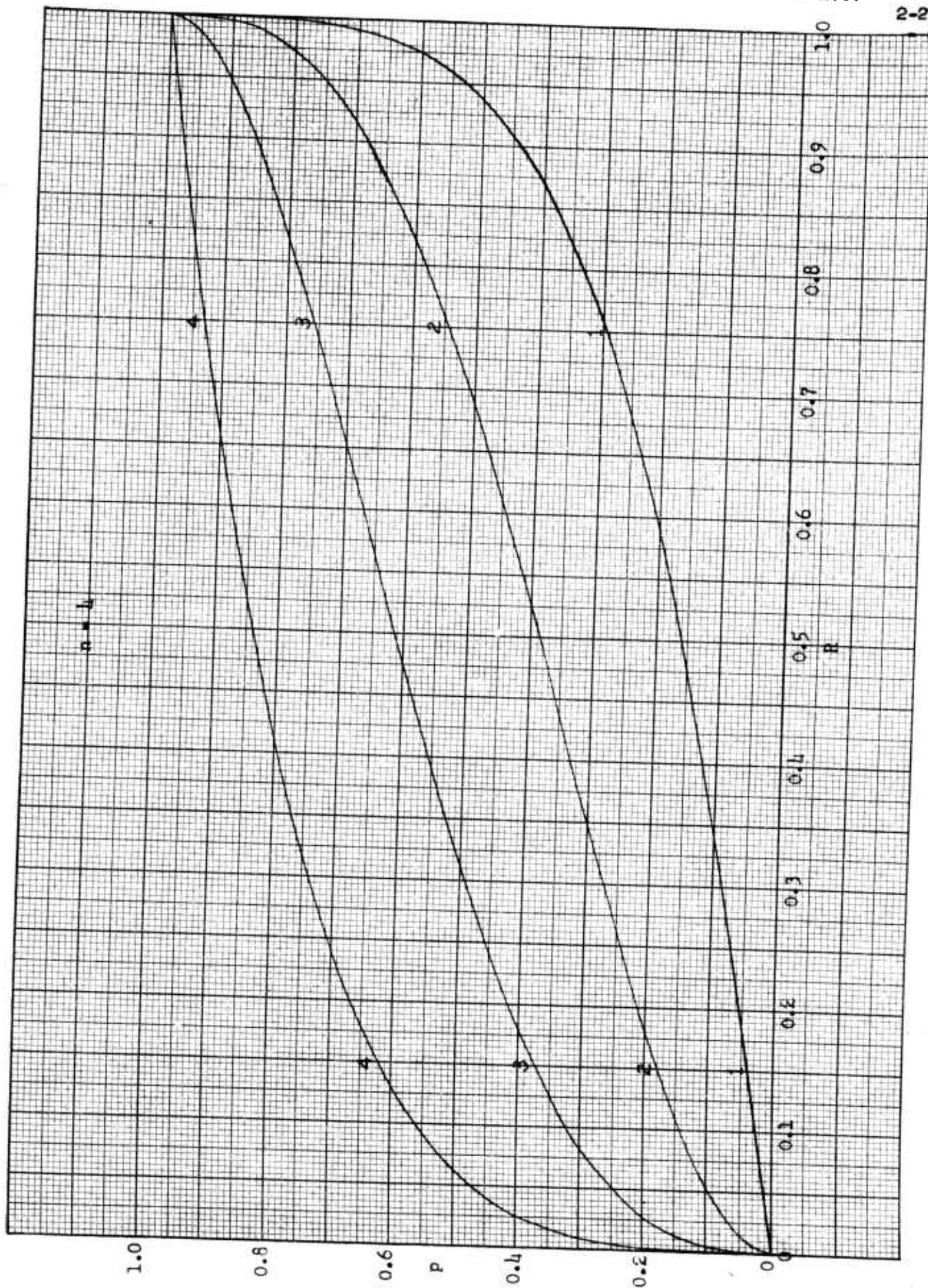


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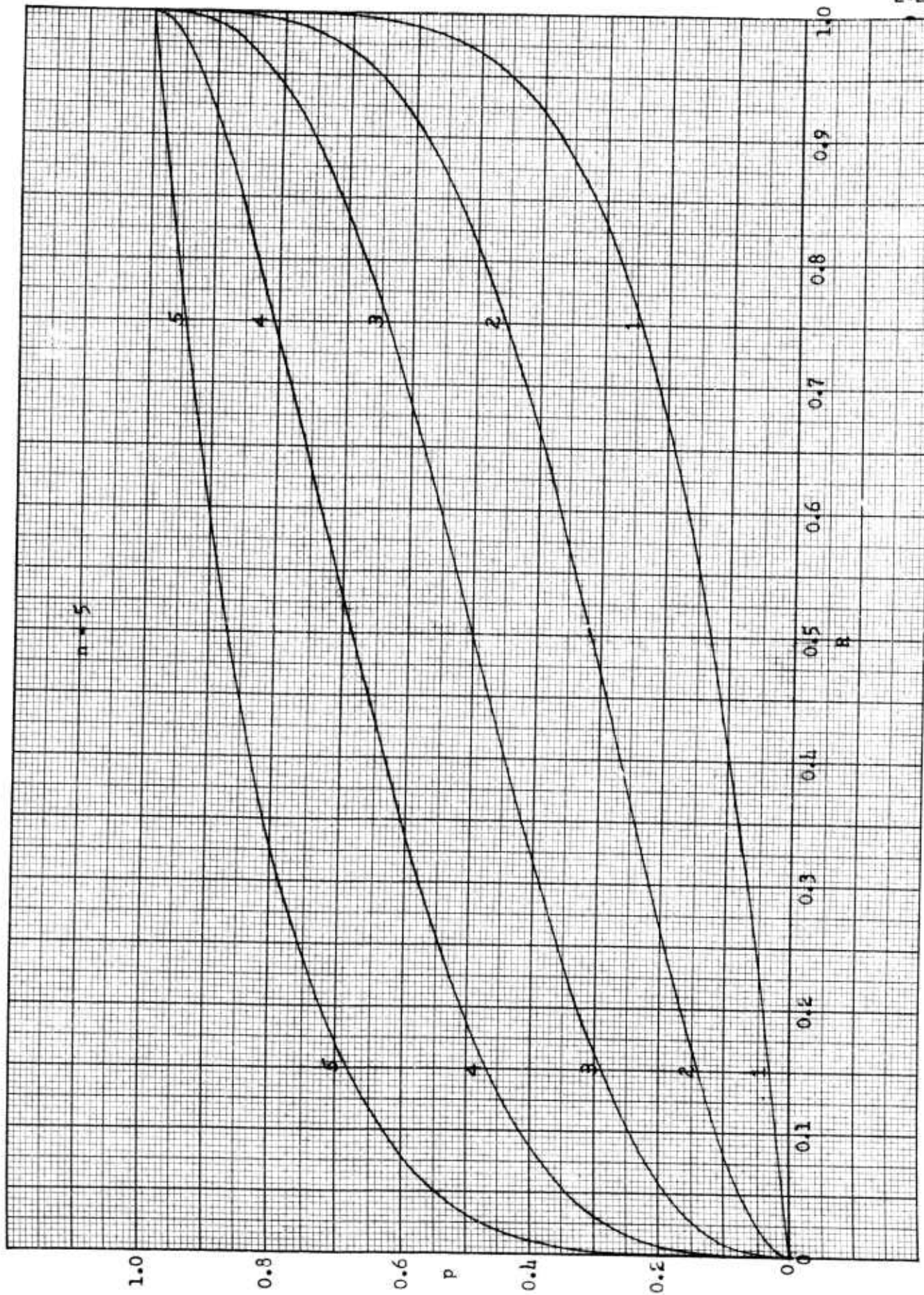
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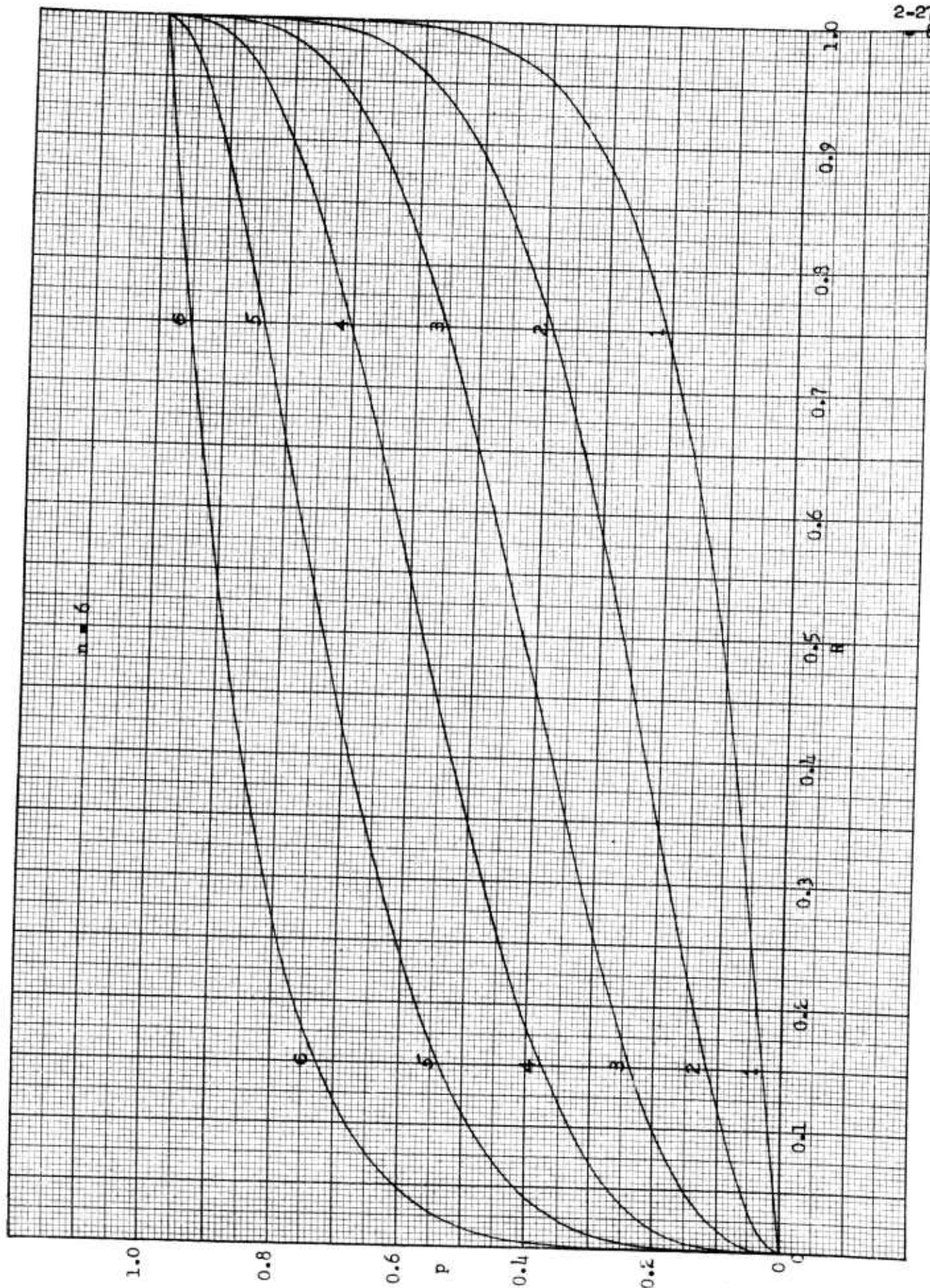
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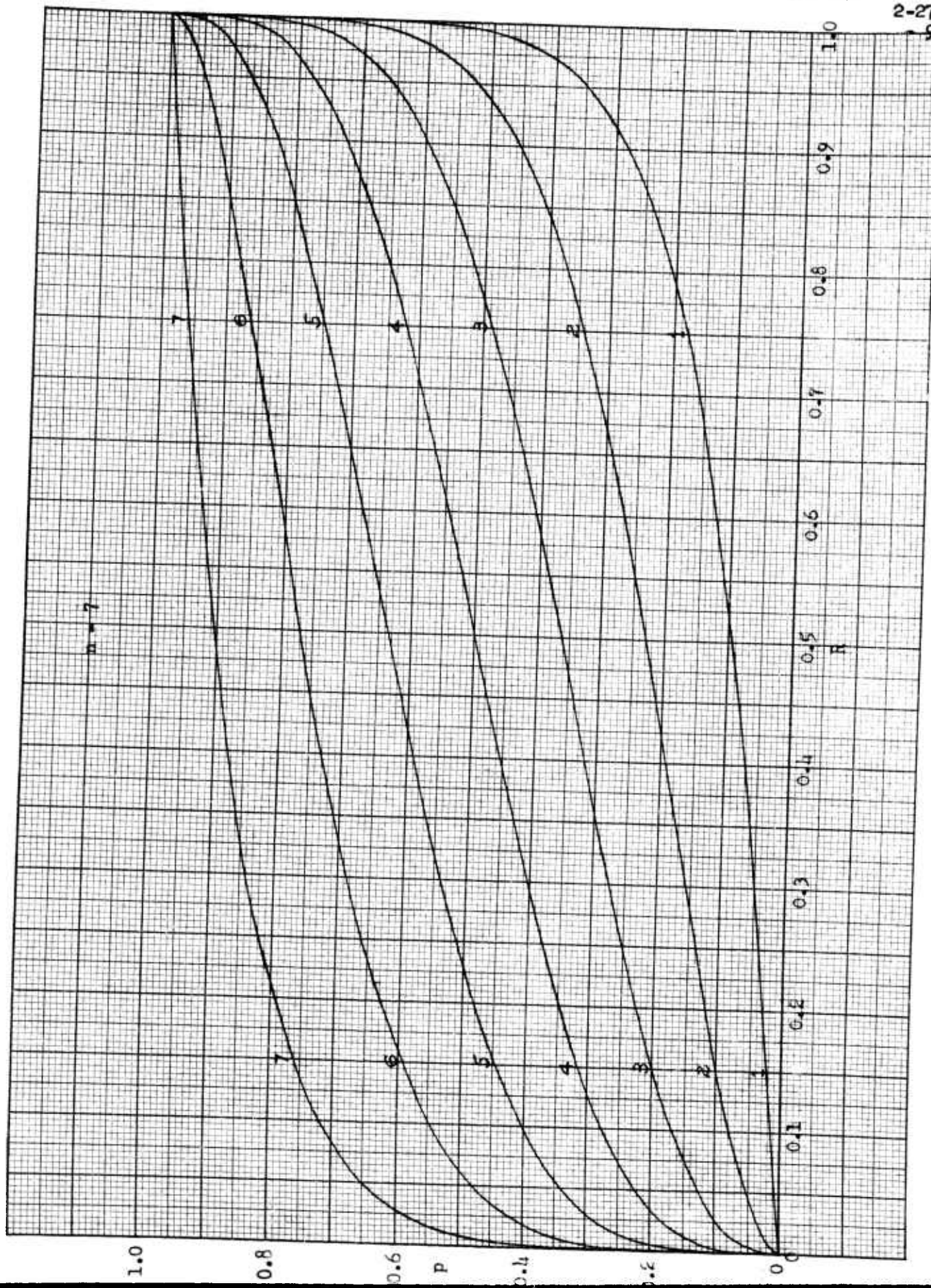


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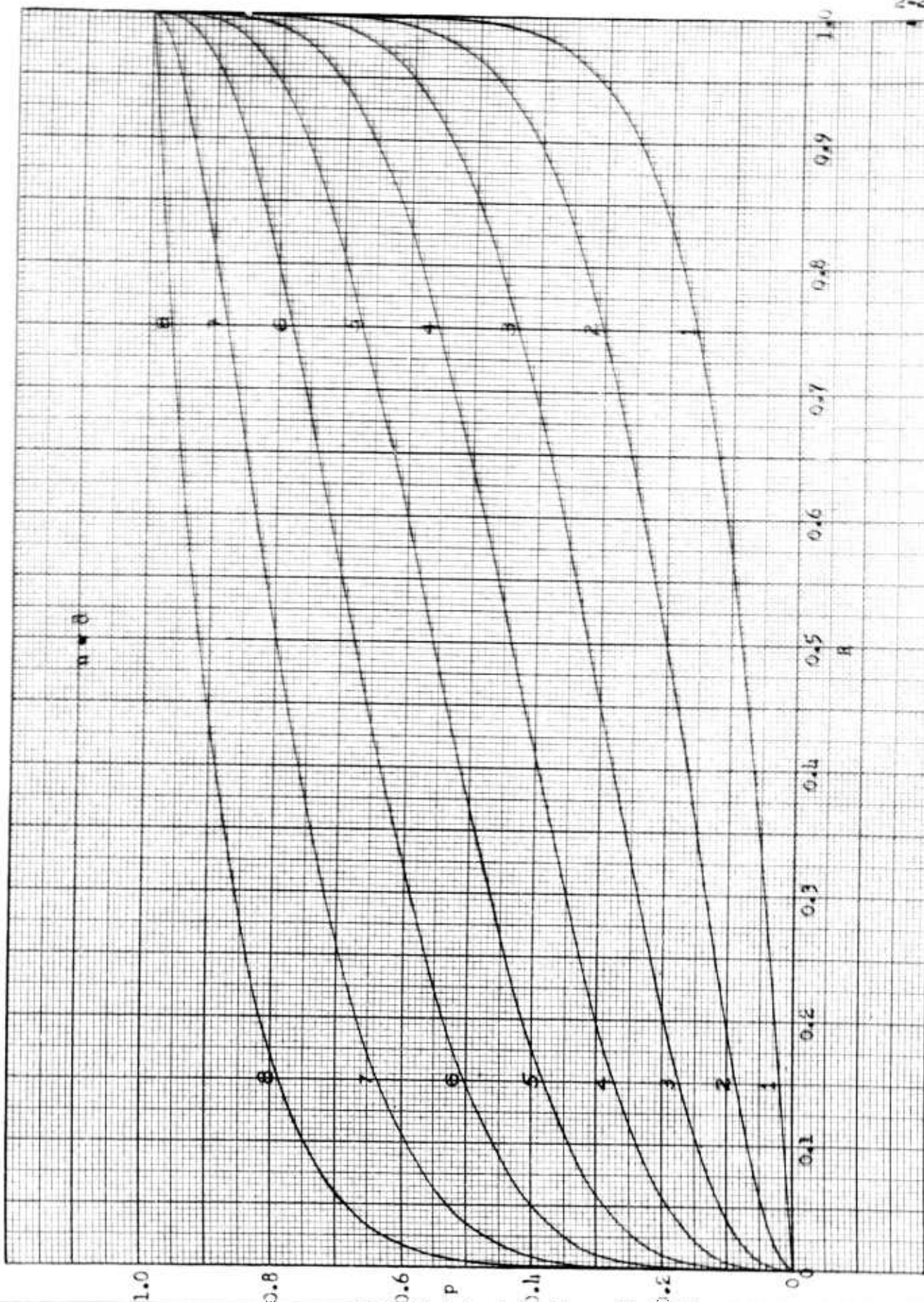


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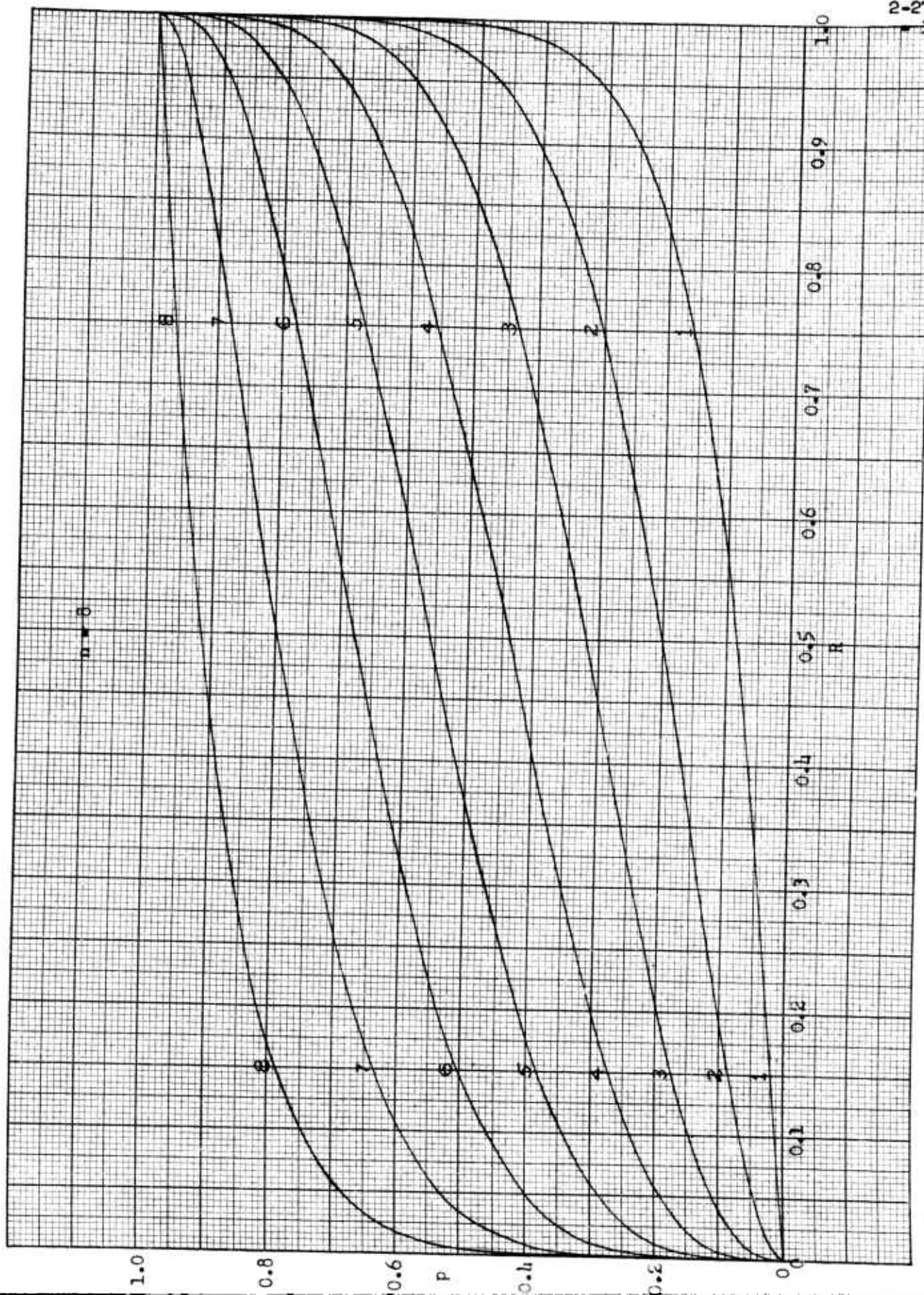


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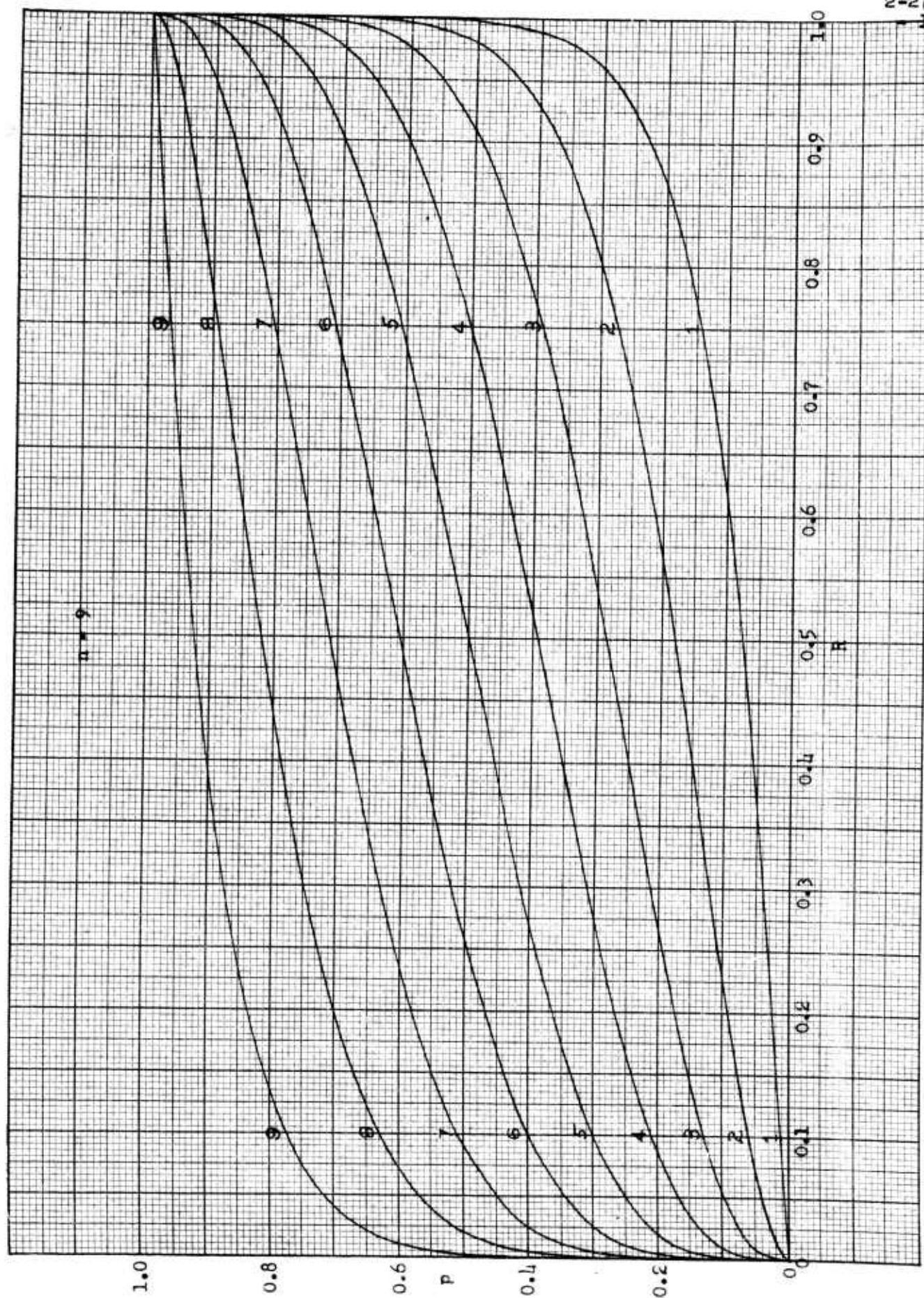


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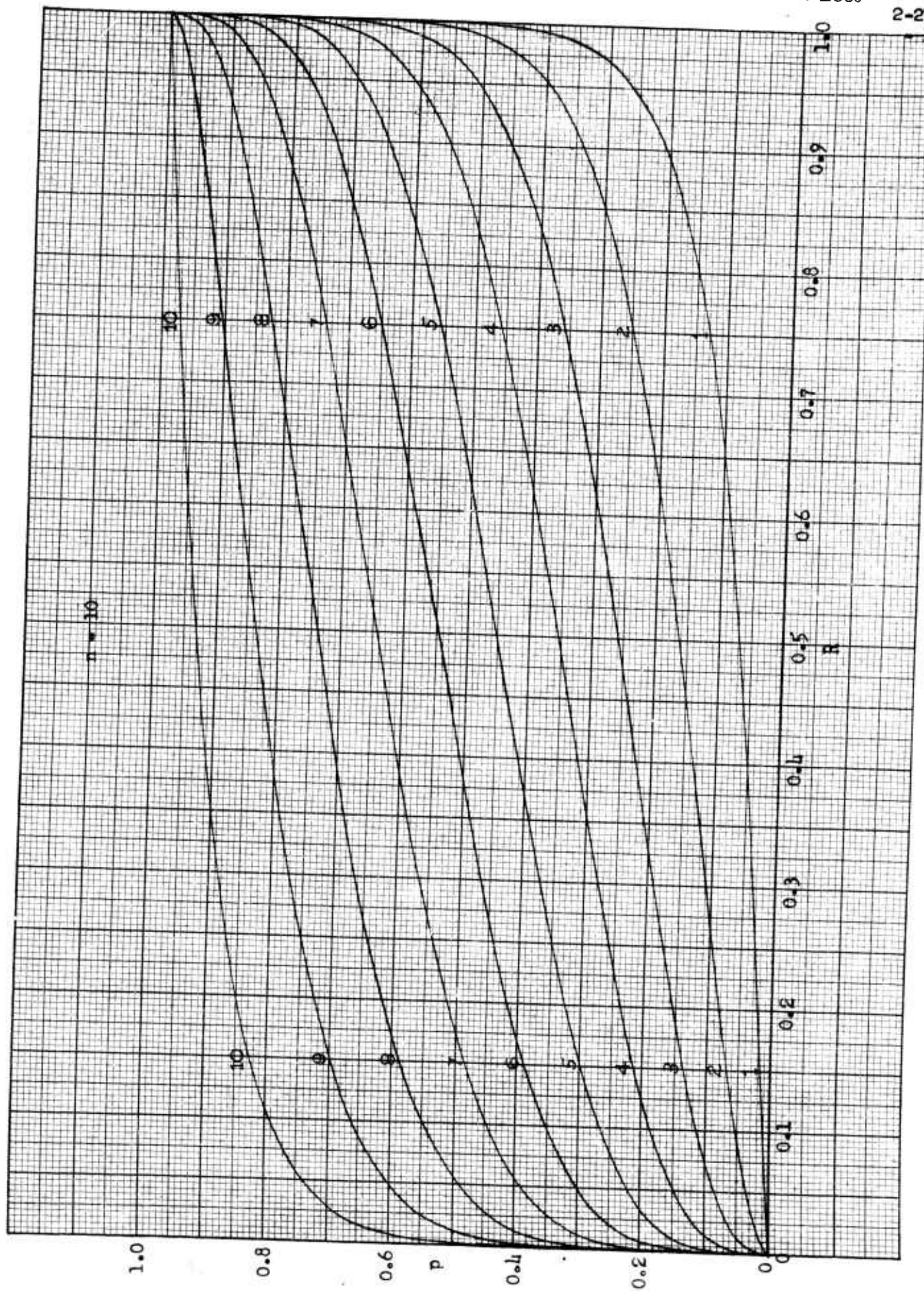


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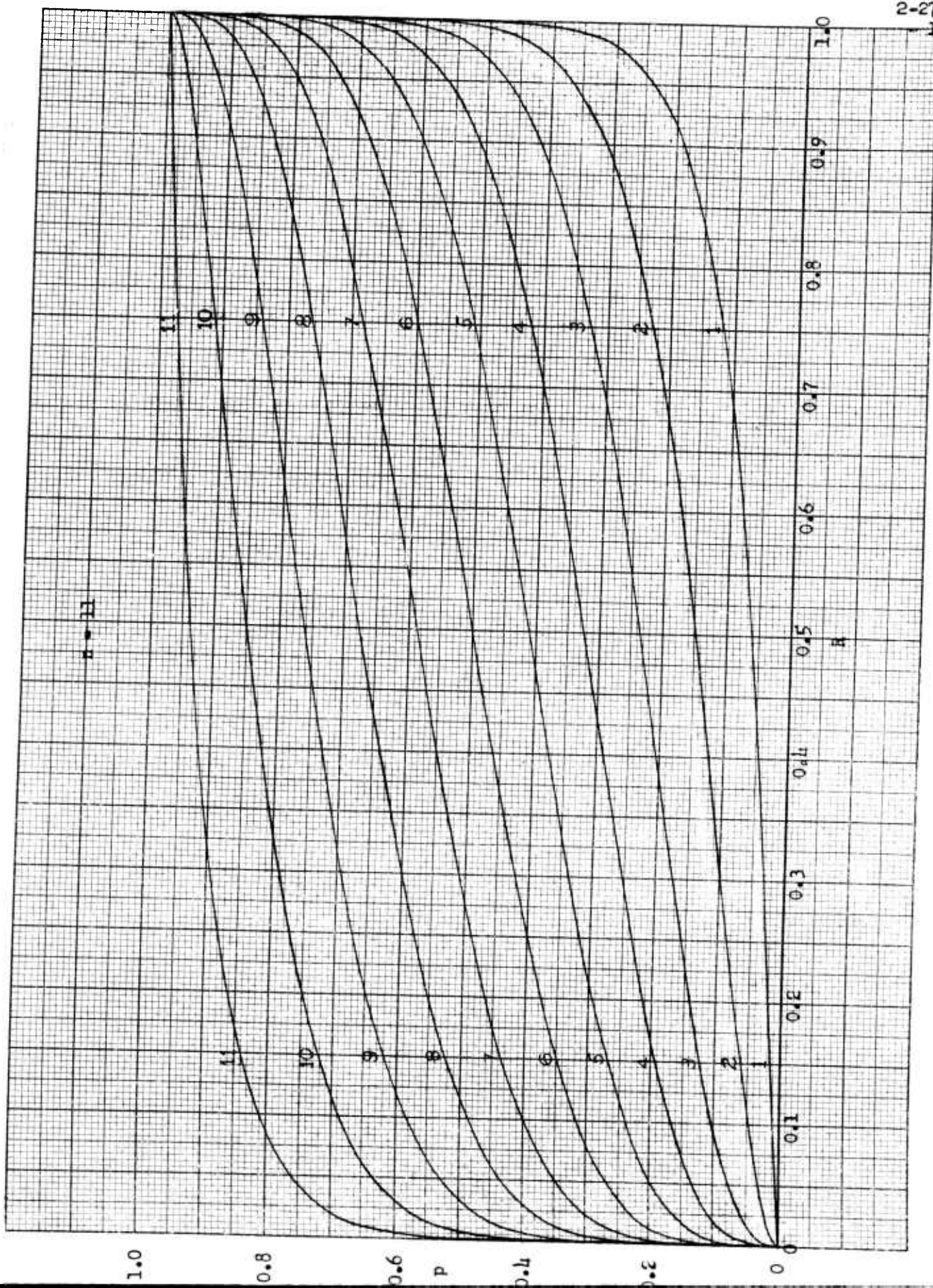
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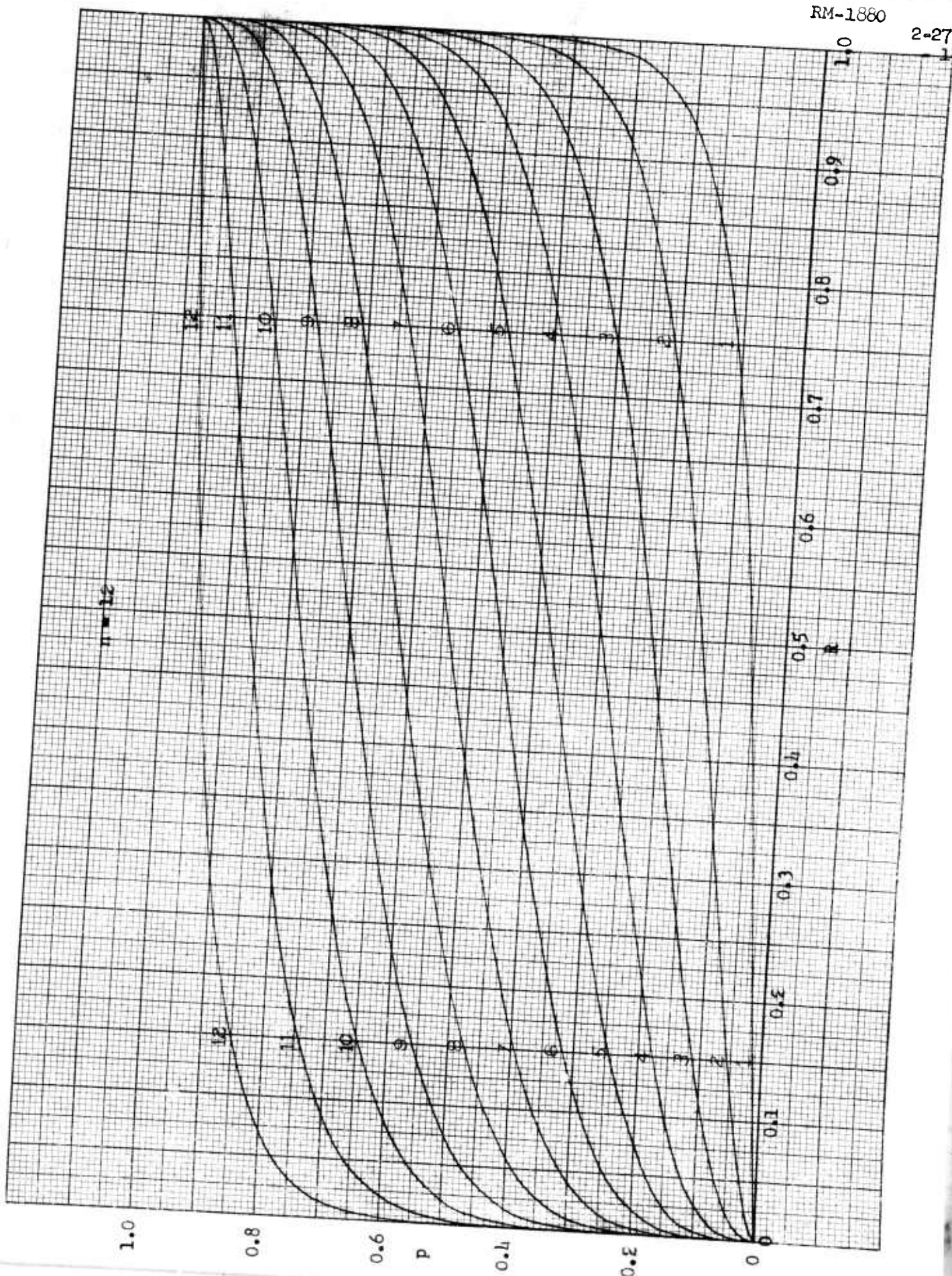
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